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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,899

10/20/2004

Hirofumi Sakamoto

121572

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25944 7590 06/11/2008

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ALEXANDRIA, VA 22320-4850

EXAMINER

BALDWIN, GORDON

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

06/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,899	Applicant(s) SAKAMOTO, HIROFUMI	
	Examiner GORDON R. BALDWIN	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1 and 8-10 is/are rejected.
- 7) ☒ Claim(s) 2-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/23/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura (U.S. Pat. No. 4,233,351) and further in view of Oda (U.S. Pat. No. 4,304,585).

Consider claims 1 and 10, Okumura discloses a honeycomb structure with a plurality of cells in a quadrilateral sectional shape with partition walls where the wall thickness of at least one part of the open passages formed in an annular portion along an outer periphery of the ceramic honeycomb structure are larger than that of the other passages. (Col. 2 lines 33-48) The passage is considered to teach that some, but not all of the outer walls will have a greater compression strength due to the increased thickness of the partition walls. Additionally, in claim 3, it is stated that all of these outer peripheral partition walls can be made thicker than other partition walls in the structure. This is considered to teach that it is known to have upwards of 100% (which is considered to encompass a majority of the partition walls) of the partition walls in the annular portion along an outer periphery of the ceramic honeycomb structure made to have a greater compression strength.

However, Okumura does not disclose that it is known to have the honeycomb structure made up of individual honeycomb segments that are held together with an adhesive, rather than one unitary honeycomb structure. However, Oda discloses that it is known to make a ceramic honeycomb structure made up of a plurality of honeycomb segments that are bound together by an adhesive. The advantage of this arrangement is that if the ceramic adhesive closely mimics the material make-up of the honeycomb segment it will thereby give the structure greater thermal stress resistance along with excellent heat-exchanging efficiency and small pressure drop within the structure. (Abstract and Col. 2 lines 41-58 and figures 1-3)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the honeycomb structure of Okumura utilizing varied wall thickness at the outer periphery to increase the compression strength of the structure with Oda, utilizing honeycomb segments bonded together to make a whole honeycomb structure. The combination obvious combination would make a honeycomb structure with greater thermal stress resistance along with excellent heat-exchanging efficiency and small pressure drop within the structure. (Oda, Abstract and Col. 2 lines 41-58 and figures 1-3)

Consider claims 8 and 9, the arrangement of particular partition walls in the honeycomb segments containing greater compression strength are considered to be obvious variations of the extrusion process to form the individual thickness of the partition walls of particular honeycomb segments, which is considered to fall within an obvious rearrangement of parts. Okumura discloses having some but not all of the

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partition walls of the honeycomb structure with greater compression strength by utilizing thicker walls in the periphery area of the structure, while Oda discloses the use of bonded honeycomb segments to make a honeycomb structure. The particular arrangement of having all the partition walls of a honeycomb segment or the entire length of a partition wall of a particular honeycomb segment with greater compression strength is considered to be an obvious rearrangement of parts (specifically what portion of the partition walls is thicker compared to the other thinner partition walls), since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86USPQ 70. Therefore, these arrangements are considered to be an obvious rearrangement since the placement of the thicker (or greater compression strength) partition walls are solely dependant upon the configuration of the extrusion mold to give thicker walls where desired by the user.

Allowable Subject Matter

Claims 2, 3, 4, 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 is allowed.

Response to Arguments

Applicant's arguments with respect to **claims 1-9** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GORDON R. BALDWIN whose telephone number is (571)272-5166. The examiner can normally be reached on M-F 7:45-5:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GRB

/Timothy M. Speer/
Primary Examiner
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